Journal of Biotechnology, 11 (1989) 365, 366
Elsevier

Contents of Volume 11

No. 1

Minireview
A. Bruynesteyn (Canada)
Mineral biotechnology 1

Research Articles
A. van Kimmenade, W. Dang and R.A. Kastelein (U.S.A.)
Secretion of murine and human interleukin-2 by *Escherichia coli* 11

M.B. Doelle and H.W. Doelle (Australia)
Ethanol production from sugar cane syrup using *Zymomonas mobilis* 25

E. Andersson and J.E. Bailey (U.S.A.)
The influence of the external pH on the production of modified protein A by *Staphylococcus aureus* 37

J.C. Lievense, J.M. Modak and H.C. Lim (U.S.A.)
A mathematical model for the asymmetric dynamic response in microbial systems 49

N.K. Shah, P.N. Nehete, V.D. Shah and R.M. Kothari (India)
Isolation of a stable and high yielding α-amylase mutant of *Bacillus subtilis* 67

N.E. Lee and J. Woodward (U.S.A.)
Kinetics of the adsorption of *Trichoderma reesei* C30 cellulase to DEAE-Macrosorb 75

Short Communication
S.D. Vlaev and M. Valeva (Bulgaria)
Applicability of sterilizable oxygen electrode response characteristics to oxygen transfer dynamic measurements in bioreactors 83

Nos. 2&3

Part I. General Aspects
S.M. Wheelwright (U.S.A.)
The design of downstream processes for large-scale protein purification 89

S.-M. Lee (U.S.A.)
The primary stages of protein recovery 103

P.M. Hammond and M.D. Scawen (U.K.)
High-resolution fractionation of proteins in downstream processing 119

G. Johansson and F. Tjerneld (Sweden)
Affinity partition between aqueous phases – a tool for large-scale purification of enzymes 135

0168-1656/89/$03.50 © 1989 Elsevier Science Publishers B.V. (Biomedical Division)

A.I. Liapis (*U.S.A.*)
Theoretical aspects of affinity chromatography 143

Part II. Applications
L. Jervis and W.S. Pierpoint (*U.K.*)
Purification technologies for plant proteins 161

W. Somers, J. Visser, F.M. Rombouts and K. van 't Riet (*The Netherlands*)
Developments in downstream processing of (poly)saccharide converting enzymes 199

P.J. Marshall (*U.K.*)
Purification of proteins from human blood plasma 223

C. Schmidt (*Sweden*)
The purification of large amounts of monoclonal antibodies 235

D.J. Stewart, P. Hughes and C.R. Lowe (*U.K.*)
Affinity chromatography on triazine dyes immobilized on novel perfluorocarbon supports 253

J.C. Pearson, Y.D. Clonis and C.R. Lowe (*U.K.*)
Preparative affinity precipitation of L-lactate dehydrogenase 267

J.A. Asenjo, L. Herrera and B. Byrne (*U.K.*)
Development of an expert system for selection and synthesis of protein purification processes 275

No. 4

Minireviews
J. Woodward (*U.S.A.*)
Immobilized cellulases for cellulose utilization 299

E.S. Bain, V.L. Lim and B.M. Peterlin (*U.S.A.*)
Designing therapies for the treatment of AIDS 313

Research Articles
R. Freitag, K. Schügerl, W.M. Arnold and U. Zimmermann (*F.R.G.*)
The effect of osmotic and mechanical stresses and enzymatic digestion on the electro-rotation of insect cells (*Spodoptera frugiperda*) 325

M.J. Boland, P.G.M. Hesselink and H. Hustedt (*F.R.G.*)
Extractive purification of enzymes from animal tissue using aqueous phase systems 337

S.A. Ortlepp, D. Pollard-Knight and D.J. Chiswell (*U.K.*)
Expression and characterisation of a protein specified by a synthetic horseradish peroxidase gene in *Escherichia coli* 353

Contents of Volume 11 365

Author Index 367

Subject Index 369